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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,875	10/02/2003	Katsumasa Yoshii	9281-4654	9827

7590 01/03/2007

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EXAMINER	
NGUYEN, DUNG T	
ART UNIT	PAPER NUMBER
2871	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/677,875	YOSHII, KATSUMASA	
	Examiner	Art Unit	
	Dung Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20 and 24-26* is/are rejected.

7)☒ Claim(s) *21-23, 27-30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's amendment dated 09/08/2006 has been received and entered. By the amendment, claims 1-20 and newly added claims 21-30 are now pending in the application.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the electrodes on the substrates are arrange at a pitch that is equal to a pitch of the reflection inclined planes must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 10, 12-13, 16 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al., US 5,841,496, in view of Sasaki, US 6,141,073 and Higashi, US 6,747,719.

Regarding the above claims, Ito et al. disclose a liquid crystal display (LCD) cell having the general structure of reflection substrate (31) on which is formed an aluminum reflecting layer (41) and an optical diffusion layer (epoxy resin smooth layer 53) deposited on the reflection substrate (31) and aluminum reflecting layer (41) (see figures 15a-15d) as well as a pitch of peaks and recesses is 20μm (col. 23, lines 15-25) as stated in the final office action.

Ito et al, however, do not disclose the surface being provided with concave portions having a depth within a range of 0.3 to 3 (μm) irregularly, adjacent concave portions arranged irregularly. Sasaki does disclose a reflective layer type LCD in which the depth of concave portion is 0.5-5 (μm). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify Itoh et al in view of Sasaki for appropriate flatness of an overcoat layer in order to improve display quality (col. 9, ln 35-55 and col. 10, ln 45-65).

Ito et al. neither disclose the optical diffusion layer having fine particles dispersed therein . Higashi discloses a light reflecting layer having a thin metal film directly or via a primer coating on individual particles of single-layer coating (title and entire patent) and having a

synthetic resin particles of a diameter range of 1-20 (μm) in a binder (col. 6, ln 15-55). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify Itoh et al in view of Higashi for efficient use of the light reflecting plate (col. 1, ln 1-15). As a result, the Applicant's haze range is met due to the same structure of the diffusion layer.

3. Claims 4-9, 11, 14-15, 17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al., US 5,841,496, in view of Sasaki, US 6,141,073 and Higashi, US 6,747,719, further in view of Meyerhofer, US 3,905,682.

Regarding the above claims, the modification to the Itoh et al. disclose the claimed invention as described above except for a front light source. Meyerhofer reference is directed to an LCD device of improved contrast by using a front light source so that light incident on a reflector can be used to increase display brightness (col. 1, ln 6-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ the Ito et al LCD cell having a front light source as shown by Meywehofer in order to increase display brightness (Id).

4. Claims 18-20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al., US 5,841,496, in view of Sasaki, US 6,141,073, Higashi, US 6,747,719, Meyerhofer, US 3,905,682, and further in view of Hay et al., US 2004/0228141 A1.

Regarding the above claims, the modification to the Itoh et al. disclose the claimed invention as described above except for a mass% of the fine particles. Hay et al. reference is directed to a diffuser for a display device in which an additive rate can be 0.5 to 1.5 mass% (see example 2). A comparison between the above values and the claimed range, it is shown that the

ranges do overlap, and it has been found that overlapping ranges at least would have been obvious. See *In re Malagari*, 499 F.2d 197, 182 USPQ 549 (CCPA 1974). Furthermore, it would have been obvious to employ a particles rate in a diffusion layer as shown by Hay et al. in order to improve light scattering power film (see [0084]).

Allowable Subject Matter

5. Claims 21-23 and 27-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed 09/08/2006 have been fully considered but they are not persuasive.

. Applicant's arguments are as follow:

a. re claims 1 and 4: the cited references do not teach or suggest "optical diffusion layer is made of a transparent resin or a transparent adhesive having fine particles dispersed therein" and such limitation of "dispersed" represents a structural element having a limitation thereto and is fully entitled to patentable weight.

b. re claim 10: Higashi does not result in the haze values of claim 10; e.g., Hay's optical diffusion layer has the same as of that of Higashi that demonstrates a haze of greater than 96%

c. re claims 18-20: Hay et al. reference is disqualified as a prior art reference. In addition, re claim 20, the examiner has engaged in hindsight since the Examiner has not explained the

reasoning that would permit the application of all of references to independent claim 20 and a pram facie case of obviousness has not been made out.

. The Examiner's responses are as follow:

a. re claims 1 and 4: it should be noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe, 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).* Therefore, as stated in the previous office action, the term "disperse" recites one step of the processing in a device claim and should not be given patentable weight. In addition, the fact that Higashi does disclose the diffusion layer having fine particles (e.g., monoparticle) therein as claimed (without of limited of dispensed method).

b. re claim 10: the Examiner agrees that the Hay et al reference teach a haze of greater than 96%; however, the Hay et al. reference do not recite a structure of a combination of Ito et al. and Higashi by itself. In other hands, the combination of Ito et al. and Higashi resulted the claimed and prior art products are identical, so as, claimed functions are presumed to be inherent (see MPEP 21 12.01).

c. re claims 18-20: It should be noted that of the filling date of the Hay et al reference is after the foreign priority date of the instant application. If Applicants wish to overcome such prior art, then sworn translation of the foreign priority documents will need to filed with the response to this Office Action. In addition, in response to applicant's argument that the examiner's

conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
12/26/2006

Dung Nguyen
Primary Examiner
Art Unit 2871